CLAIMS

1. Self-closing valve (V) for dispensing an in particular liquid or pasty product (6), having a valve diaphragm (1), the valve diaphragm (1) being of convex shape, as seen from the product side, at least in the dispensing region (2), characterized in that the valve diaphragm (1) has, on the periphery, a holding ring (5) which is formed by encapsulation.

2. Self-closing valve according to Claim 1 or in particular according thereto, characterized in that the valve diaphragm (1) has a dispensing slit (4), walls (4') of the dispensing slit (4) opening in a gap-like manner on the product side.

3. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that, in the gap base (8), the slit walls (4') butt against one another.

4. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the convex shaping is associated with inner stressing to which the valve diaphragm (1) is subjected.

5. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the valve diaphragm (1) is of convex shape throughout as far as the peripheral region (9).

6. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the holding ring (5) is formed in a cross-sectionally U-shaped

manner in order to enclose an outer periphery (10) of the valve diaphragm (1).

7. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that extending from the holding ring (5) are securing spigots (11) which engage through the valve diaphragm (1).

8. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the U-legs (12, 13) of the holding ring (5) are formed to be of different lengths.

9. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the U-leg (12) of the holding ring (5), which is directed away from the product, is formed to be longer than the U-leg (13), which is directed toward the product.

10. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the holding ring (5) has a latching recess (19) for latching the valve (V) into a dispensing container (14).

11. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the latching recess (19) is associated with the U-web (24).

12. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the valve diaphragm (1) consists of silicone.

13. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the valve diaphragm (1) consists of TPE.

14. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the valve diaphragm (1) is produced with the holding ring (5) by two-component injection molding.

15. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the valve diaphragm (1) consists of a plastics sheet material.

16. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the plastics sheet material is multilayered.

17. Self-closing valve according to one more of the preceding claims or in particular according thereto, characterized by a material combination of the multilayered plastics sheet material.

18. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that, on the product side, the valve diaphragm (1), in its dispensing region (2), has a plate part (25) positioned beneath it.

19. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the plate part (25) is formed integrally with the holding ring (5).

20. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the plate part (25) is attached resiliently relative to the valve diaphragm (1).

21. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the plate part (25) is attached to the holding ring (5) outside a dispensing slit (4) of the valve diaphragm (1) in the radial direction.

22. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the dispensing slit (4), along a diameter extent, projects beyond the region of overlap with the plate part (25).

23. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that on its surface (26), which is directed toward the valve diaphragm (1), the plate part (25) is of curved configuration in adaptation to the convex profile of the valve diaphragm (1).

24. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that, with the exception of resilient attachment arms (28), the holding ring (5) has an outline in plan view which differs from the circular shape of the plate part (25).

25. Self-closing valve according to one or more of the preceding claims or in particular according thereto, characterized in that the radius of curvature of the valve diaphragm corresponds to 0.8 to 1.4 times the valve diaphragm (1).

26. Container closure which is produced by plastics injection molding and has a self-closing valve (V), a valve diaphragm (1) and a plate part (25) covering the valve diaphragm (1) on the product side, characterized in that the plate part (25) is disposed such that it can be moved relative to the valve diaphragm (1).

27. Container closure according to the preamble of Claim 26 or in particular according thereto, characterized in that the plate part (25) is disposed such that it can be moved resiliently relative to the valve diaphragm (1).

28. Container closure according to Claim 26 or in particular according thereto, characterized in that the plate part (25) is formed integrally with the container closure (15), and in that the separately formed valve (V) is secured in the container closure (15).

29. Container closure according to one or more of the preceding claims or in particular according thereto, characterized in that integrally formed on the container closure is a swing lid (32) which, in the closed state, acts on the valve diaphragm (1) by way of a holding-down means (36).

30. Container closure with a plate part according to Claim 18 or in particular according thereto, characterized in that the plate part (25) and integrally formed resilient attachment arms (28) can be pressed against one another with closing action so as to prevent substance from escaping.

31. Container closure according to Claim 30 or in particular according thereto, characterized in that the plate part (25) and the resilient arms

(28) attached thereto can be adjusted in relation to one another such that a closed state is achieved independently of the valve diaphragm (1).

32. Container closure according to one or more of the preceding Claims 30 and 31 or in particular according thereto, characterized in that integrally formed on the plate part (25) is a radially outwardly projecting closure shield (43) against which the resilient attachment arm (28) can be drawn with closing action.

33. Container closure according to one or more of the preceding Claims 30 to 32 or in particular according thereto, characterized in that integrally formed on the holding ring (5) and/or the wall (44) of the dispensing container (B) is an inwardly projecting closure shield (45) against which the resilient attachment arm (28) can be drawn with closing action.

34. Container closure according to one or more of the preceding Claims 30 to 33 or in particular according thereto, characterized in that formed on the resilient attachment arm (28) is a guide flange (46) which projects on the product side and interacts with a run-on slope (47) of the wall (44) of the dispensing container (B).